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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
KARACSONY, ROBERT	

ART UNIT	PAPER NUMBER
2892	

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/544,121	WEDEL ET AL.	
	Examiner	Art Unit	
	Robert Karacsony	2892	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 August 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08022005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of a certified copy of the EP 03445020.5 application referred to in the oath or declaration or in an application data sheet. If this copy is being filed to obtain the benefits of the foreign filing date under 35 U.S.C. 119(a)-(d), applicant should also file a claim for such priority as required by 35 U.S.C. 119(b). If the application being examined is an original application filed under 35 U.S.C. 111(a) (other than a design application) on or after November 29, 2000, the claim for priority must be presented during the pendency of the application, and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior foreign application. See 37 CFR 1.55(a)(1)(i). If the application being examined has entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the claim for priority must be made during the pendency of the application and within the time limit set forth in the PCT and Regulations of the PCT. See 37 CFR 1.55(a)(1)(ii). Any claim for priority under 35 U.S.C. 119(a)-(d) or (f) or 365(a) or (b) not presented within the time period set forth in 37 CFR 1.55(a)(1) is considered to have been waived. If a claim for foreign priority is presented after the time period set forth in 37 CFR 1.55(a)(1), the claim may be accepted if the claim properly identifies the prior foreign application and is accompanied by a grantable petition to accept an unintentionally delayed claim for priority. See 37 CFR 1.55(c). The form submitted by the applicant is not for claims to foreign priority but for applications preceding foreign priority.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant claims "to define the first conductive surface portion of the lead." In the claim of which it depends on the applicant claims the *first conductive surface* and the *lead* as two distinct parts. For examination purposes the examiner interprets the claim to read, "to define the first conductive surface portion and the lead."

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-10, 13, 16, 18-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Nevermann (WO 02/35810, hereafter '810; Reference to US 6,980,157 will be used as English translation of this document). Note: Rejections are based on two separate interpretations of the reference.

Interpretation 1:

Claim 20: '810 teaches a method of manufacturing an integrated speaker carrier and antenna element for a communication terminal comprising:

Providing a flexible film (Fig. 2, 11) of an insulating material (col. 3/lines 9-12), having a first conductive surface portion (Fig. 2, 1b), and an elongated second portion (Fig. 5, 15) carrying a lead (15) insulated from said first portion (Fig. 5 illustrates that conductive leads 15 must be insulated from conductive surface 1b in order for them to be operative and not shorted together) and extending away from adjacent to said first portion (Fig. 5 illustrates the location of 15 on top of 1b, thus protruding out and adjacent to 1b);

Attaching a speaker (col. 3/lines 33-36) to an outer end (Fig. 5, 18) of the elongated second portion, connected to said lead;

Forming an aperture in said first portion (Fig. 5, 6); and

Bending the elongated second portion (Fig. 5 illustrates they are bent) such that said speaker is positioned at the aperture (col. 3/lines 32-40).

Claims 1, 3 and 4: Claims 1, 3 and 4 are rejected for substantially the same reasons as claim 21, as discussed above.

Claim 2: '810 teaches the second portion carries a pair of conductive leads (Fig. 5, 15) from adjacent said first portion to respective speaker connection pads (Fig. 5, 18) at said outer end (Fig. 5).

Claim 5: '810 teaches said conductive lead extends from a connection pad (Fig. 5, 17) arranged adjacent to said first portion at a straight edge of said flexible film (Fig. 5 illustrates 17 is located on top of 1b, thus adjacent to, and Fig. 2 illustrates 17 is located along the bottom edge 11).

Claim 6: '810 teaches said conductive first portion is a ground plane of an antenna for a radio communication terminal (col. 4/lines 4-14).

Claim 7: '810 teaches said conductive first portion is an antenna element (col. 3/lines 7-15) of an antenna for a radio communication terminal (col. 3/lines 7-15), and has a pattern adapted to provide resonance at predetermined radio frequencies (col. 3/lines 57-63).

Claim 8: '810 teaches a support structure (Fig. 2, 20) carrying a second antenna element (Fig. 2, 1a; support structure 20 is carrying second antenna element 1a through part 11), is arranged at a predetermined distance from said first antenna element (Fig. 2 illustrates predetermined distance between 20 and top part of first antenna element 1b within screened cavity 8).

Claim 9: '810 teaches said flexible film is attached to said support structure such that said conductive first portion is electrically connected to a ground plane of said support structure (col. 4/lines 4-14).

Claim 18: '810 teaches said support structure is a printed circuit board of a radio communication terminal (col. 4/lines 4-6).

Claim 19: '810 teaches a radio communication terminal, comprising an integrated speaker carrier and antenna element as recited in claim 1 (col. 3/lines 7-10).

Interpretation 2:

Claim 1: '810 teaches an integrated speaker carrier and antenna element for a communication terminal, comprising:

A sheet of flexible film (Fig. 2, 1b) having a conductive first portion (col. 3/lines 12-14 discloses 1b as a "conducting area") forming a first antenna element (col. 3/lines 7-15), and an elongated second portion (Fig. 5, 15) carrying a conductive lead (15) extending from adjacent to said first portion (Fig. 2 illustrates the location of 15 on top of 1b, thus protruding out and

adjacent to 1b) to a speaker (col. 3/lines 33-36) connected to an outer end (Fig. 5, 18) of said elongated second portion;

Wherein said elongated second portion is bendable (col. 4/lines 32-34) such that said speaker is positioned at an aperture (Fig. 5, 6; col. 3/lines 32- 40) in said first portion.

Claim 6: '810 teaches said conductive first portion is a ground plane of an antenna for a radio communication terminal (col. 4/lines 4-14).

Claim 8: '810 teaches a support structure (Fig. 2, 20) carrying a second antenna element (Fig. 2, 1a; support structure 20 is carrying second antenna element 1a through part 11), is arranged at a predetermined distance from said first antenna element (Fig. 2 illustrates predetermined distance between 20 and top part of first antenna element 1b within screened cavity 8).

Claim 10: '810 teaches said flexible film is attached at a side edge thereof (side edges defined by where the interior wall 10 meets the bottom side of 1b shown in Fig. 2) to said support structure (col. 4/lines 4-14), at which a side edge (any surface of connector pad) of a connector pad (Fig. 5, 17) to said conductive lead is arranged (Fig. 5).

Claim 13: '810 teaches an insulating spacer (Fig. 2, 11) is arranged intermediate said support structure and said flexible film (Fig. 2 illustrates a portion of 11, defined as the lower left portion of 11, arranged intermediate 20 and 1b), defining said predetermined distance between said first and second antenna elements (Fig. 2 illustrates insulated spacer 11 defining screened cavity 8 thus defining predetermined distance between first and second antenna).

Claim 16: '810 teaches said spacer is attached to said support structure by cooperating engagement members (col. 4/lines 16-27 discloses said spacer 11 attached to said support structure through first antenna 1b).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over '810 (Interpretation 2) in view of Phillips et al. (US 6,297,778, hereafter '778).

'810 teaches all of the limitations of claim 10, as discussed above. '810 fails to teach said connector pad is connected, at said side edge thereof, to speaker control circuitry arranged on said support structure. However, '778 teaches that it is suitable to arrange speaker control circuitry on a printed circuit board of a cordless communication device (col. 3/lines 19-22). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have located the speaker control circuitry of '810 on the printed circuit board of '778 with a reasonable expectation of success.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over '810 (Interpretation 2) in view of Fu (US 2002/0171587, hereafter '587) and '778.

'810 teaches all of the limitations of claim 8, as discussed above, as well as said conductive first portion being electrically connected to a ground plane of said support structure at said straight edge (col. 4/lines 4-14; Side edges defined by where the interior wall 10 meets the bottom side of 1b shown in Fig. 2). '810 fails to teach that the flexible film is bar soldered at a straight edge to said support structure. However, '587 teaches that it is suitable to solder antennas to a printed circuit board of a wireless communication device [0022],[0026]. The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have soldered the straight edge of the flexible film of '810 to the support structure by the same means disclosed in '587 with a reasonable expectation of success.

'810 also fails to teach a connector pad to said conductive lead is connected to speaker control circuitry arranged on said support structure. This is obvious for the substantially the same reasons discussed above for claim 11.

8. Claims 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over '810 (Interpretation 2) in view of Yamamori (JP 2002028287 A, hereafter '287).

Claim 14: '810 teaches all of the limitations of claim 13, as discussed above. '810 fails to teach said spacer comprises speaker attachment means, devised to secure said speaker adjacent to said aperture. However, '287 discloses a means to attach a speaker, which allows for easy and reliable attachment (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the spacer of '810 with the speaker

attachment means of '287 in order to have easily and reliably attached the speaker adjacent to said aperture.

Claim 17: '810 teaches all of the limitations of claim 13, as discussed above. '810 fails to teach said spacer has a protruding member engaging with a recess in said support structure. However '287 teaches a means of attachment which involves inserting protrusions into holes which allows for easy and reliable attachment (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the attachment means of '287 with the spacer and support structure for '810 in order to have easily and reliably attached the two components.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over '810 in view of Nakada et al. (US 6,360,105, hereafter '105).

'810 teaches all of the limitations of claim 13, as discussed above. '810 fails to teach said flexible film is attached to said spacer with an adhesive. However, '105 teaches a suitable means for attaching an antenna for a cell phone using an adhesive (col. 3/lines 66-67;col. 4/line 1). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the adhesive of '105 to have attached the flexible film of '810 to said spacer with a reasonable expectation of success.

10. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over '810 in view of Rudisill et al. (US 6,208,874, hereafter '874) and Huber et al. (WO01/47056, hereafter '056; Reference to US 6,839,040 will be used as English translation of this document).

'810 teaches all of the limitations of claim 20, as discussed above. '810 fails to teach:

Coating said insulating film with a conductive material;

Removing selected portions of the conductive material from the film, to define the first conductive surface portion and the lead;

Cutting the film such that the elongated second portion thereof, carrying said lead, is shaped.

However, '874 teaches a method of manufacturing speaker traces and antennas by first plating a surface and then photoetching the plated surface to form the speaker traces as well as the antennas (col. 14/lines 38-40). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have plated the insulating film of '810 and photoetched the desired portions the create the desired leads as well as the first conductive surface in the same manner taught in '874 with a reasonable expectation of success.

'056 teaches a method of cutting the support of an antenna for a communication terminal to shape it to fit in a round casing (col. 6/lines 31-36). It is well known in the art that mobile phones are aiming towards being built smaller and smaller which is why this proves to be advantageous, since round cases reduce the size. Therefore, it would have been obvious to one

of ordinary skill in the art at the time the invention was made to have cut the flexible film (support) of '810, which in turn shapes the elongated second portion carrying said lead, for the same reasons disclosed in '056 in order to have reduced the size of the communication terminal.

Claims 22 and 23: Claims 22 and 23 are rejected for substantially the same reasons as claim 21, as discussed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Karacsony whose telephone number is 571-270-1268. The examiner can normally be reached on M-F 7:30-5 EST with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RK/RK

MICHAEL B. CLEVELAND
SUPERVISORY PATENT EXAMINER